

PRODUCT  
MANUAL

HEBEI TONGLI VALVE

*Providing systematic  
solutions on application  
of valve in globe*





Table 1: Technical data

Nominal size <sup>1)</sup>	DN 50 to 300 - NPS 2 to 12		DN 50 to 150 - NPS 2 to 6	
Nominal pressure	PN 10		PN 10, PN 16 on request	
Body style	Wafar-type - Lug-type on request			
Face-to-face dimensions	EN 558-1 Series 20 (DN 3202 K1)			
Mounted between flanges	PN 10, PN 16 or Class 150			
Temperature range				
Seat ring	EPDM	-10 to +120 °C (1.4 to 248 °F)		
	PTFE	-10 to +150 °C (1.4 to 302 °F)		
Permissible operating pressure				
Seat ring <sup>2)</sup>	EPDM	10 bar - 9.5 bar at 120 °C	16 bar on request only with body of EN-JS1049	
	PTFE	10 bar up to 50 °C, 7 bar at 150 °C		
Leakage class according to EN 12266-1	Test P12, leakage rate A			

<sup>1)</sup> Larger valve sizes on request  
<sup>2)</sup> Special version for vacuum service (100 mbar abs.)

Table 2: Materials

Body	Cast iron EN-1040	Spheroidal graphite iron EN-GJS-400-18-UT	Spheroidal graphite iron EN-GJS-400-18-UT	
Seat ring	EPDM - Others (e.g. silicone on request)		PTFE	
Elastomer	Silicone			
Butterfly disk	EN-JS1030 (CrNiMo steel up to DN 150/NPS 6)		CrNiMo steel	PTFE-coated
	1.4021 (CrNiMo steel up to DN 150/NPS 6)		CrNiMo steel	1.4462
Shaft	CrNiMo steel		CrNiMo steel	
Retainer	-		1.4305	
Bearing bushing with O ring	POM/NBR		POM/NBR	
Disk spring	-		Spring steel	

Table 3: K<sub>vs</sub> coefficients

Nominal size	Opening angle									
	10°	20°	30°	40°	50°	60°	70°	80°	90°	
50	2	1.8	7	16	26	44	70	115	175	210
65	2 1/2	2.8	10	23	39	60	95	155	280	340
80	3	3.5	14	33	57	95	146	240	380	510
100	4	5.5	25	54	95	155	240	395	620	820
125	5	8.6	38	86	155	240	385	635	950	1200
150	6	14.5	52	120	215	342	547	940	1380	1800
200	8	20.5	95	215	376	590	940	1540	2400	3200
250	10	33	154	342	607	940	1540	2310	4000	5300
300	12	45	222	514	855	1455	2310	3160	6000	8000

Table 4: Differential pressure tables for JKTL Shut-off Butterfly valve - All pressures in bar

Table 4.1: Permissible differential pressures (fail-close)

Nominal size DN	NPS	Shaft Ø	Actuator size of type SDP	Number of springs n ±	Req. signal pressure <sup>1)</sup>	Differential pressure <sup>2)</sup>	Max. perm. supply pressure with shaft of		
							1.4021	1.4462	
50	2	14	150	3	2.5	1.6	4.1	6.0	
			100	4/5	4	1.6	6	6.0	
			220	2/3	2.5	1.6	2.8	4.6	
65	2 1/2	14	150	4	3.5	1.6	4.5	6.0	
			100	5/6	5	1.6	6	6.0	
			220	3	2.5	1.6	2.9	4.8	
80	3	14	150	4/5	4	1.6	4.7	6.0	
			100	6	5.5	1.6	6	6.0	
			300	3	2.5	5	3.3	5.4	
100	4	16	220	4/5	4	1.6	4.4	6.0	
			150	6	5.5	5	6	6.0	
			450	3	2.5	1.6	3.4	5.7	
125	5	19	300	4/5	4	5	5.3	6.0	
			220	6	5.5	1.6	6	6.0	
			600	3	2.5	5	2.9	4.7	
150	6	19	450	4/5	4	10	-	-	
			300	6	5.5	5	6	6.0	
			1200	3	2.5	10	3.7	3.4	5.7
200	8	22	900	4/5	4	1.6	5.1	4.7	6.0
			600	6	5.5	10	6	6	6.0
			2000	3	2.5	1.6	3.3	3.1	5.1
250	10	29	1200	4/5	4	10	5.6	5.1	6.0
			900	6	5.5	10	6	6	6.0
			3000	2/3	2.3	10	2.6	-	3.7
300	12	29	1200	5/6	5	5	6	5.5	6.0

<sup>1)</sup> Required supply pressure to open the valve  
<sup>2)</sup> When the valve is closed, the differential pressure is restricted by the valve version (see Table 1).

Table 4.2: Permissible differential pressures (fail-open)

Nominal size DN	NPS	Shaft Ø	Actuator size of type SDP	Number of springs n ±	Req. signal pressure <sup>1)</sup>	Differential pressure <sup>2)</sup>	Max. perm. supply pressure with shaft of		
							1.4021	1.4462	
50	2	14	150	2	2.5	1.6	3.8	6.0	
			100	3/4	4	1.6	5.5	6.0	
			220	2	2.5	1.6	2.6	4.4	
65	2 1/2	14	150	3/4	4	1.6	4.3	6.0	
			100	5	5.5	1.6	6	6.0	
			220	2	2.5	1.6	2.6	4.4	
80	3	14	150	3/4	4	1.6	4.3	6.0	
			100	5	5.5	5	6	6.0	
			300	2	2.5	10	2.9	5.1	
100	4	16	220	3	3.5	1.6	6.0	3.8	6.0
			150	5	5.5	10	6	6	6.0
			450	2	2.5	1.6	3	5.3	
125	5	19	300	3/4	4	1.6	4.9	6.0	
			220	5	5.5	1.6	6	6.0	
			600	2	2.5	10	2.6	4.3	
150	6	19	450	3/4	3.5	5	3.6	5.8	
			300	5	5.5	10	6	5.6	6.0
			1200	2	2.5	10	3.4	3	5.3
200	8	22	900	3/4	4	1.6	4.9	4.5	6.0
			600	5	5.5	1.6	6	6	6.0
			2000	2	2.5	1.6	3	2.7	4.8
250	10	29	1200	3/4	4	10	5.2	4.8	6.0
			900	5	5.5	10	6	6	6.0
			3000	2/3	3	10	3.2	-	4.9
300	12	29	1200	5	5.5	10	5.7	-	6.0

<sup>1)</sup> Required supply pressure to close the valve  
<sup>2)</sup> When the valve is closed, the differential pressure is restricted by the valve version (see Table 1).

Table 5: Shaft torque as well as opening and closing torques in Nm

Nominal size	DN	NPS	Perm. shaft torque (up to 20 °C/68 °F) with material		Opening and closing torques at Δp		
			1.4021	1.4462	5 bar <sup>1)</sup>	10 bar	16 bar
50	2		79	158	28	29	29
65	2 1/2		79	158	33	34	36
80	3		79	158	39	44	47
100	4		118	236	59	64	69
125	5		198	394	83	98	98
150	6		198	394	123	137	157
200	8	552	480	960	206	235	275
250	10	814	703	1406	314	363	412
300	12	814	703	1406	441	530	589

<sup>1)</sup> The higher torques in the column for 10 bar apply to a differential pressure of 5 bar when the seat ring is made of PTFE.

Table 6: Dimensions and weights for JKTL Pneumatic Butterfly Valve

Valve	DN	50	65	80	100	125	150	200	250	300
	NPS	2	2 1/2	3	4	5	6	8	10	12
Length L	mm	43	46	46	52	56	56	60	68	78
Shaft Od	mm	14	14	14	16	20	20	22	28	28
B	mm	60	67	75	94	113	126	158	191	222
A	mm	145	160	175	195	210	225	258	288	318
Flange	DN 3337	F07	F07/F10	F07/F10	F07/F10	F10/F12	F10/F12	F12/F14	F14/F16	F14/F16
AF	mm	17	17/22	17/22	17/22	22/27	22/27	27/36	36/46	36/46
C (mounting plate)	mm	12	12	12	12	12	12	12	12	12
Weight	kg [approx.]	2.8	3.3	3.8	5.5	7.5	9.3	15	22	33

Table 7: Dimensions and weights for JKTL Rotary Actuator

Size	100	150	220	300	450	600	900	1200	2000	3000	
H3	mm	248	269	315	345	409	438	487	543	621	684
E	mm	135	147	175	187	207	226	271	295	349	380
Connecting flange DN 3337		F07	F07	F10	F10	F12	F12	F14	F14	F16	F16
AF	mm	17	17	22	22	27	27	36	36	46	46
Weight	kg	4.5	6.5	10	13	18.5	24	32	46	65	103

HEBEI TONGLI VALVE



## COMPANY BRIEF INTRODUCTION

HEBEI TONGLI SELF-CONTROL VALVE CO., LTD. was founded in 1995 which headquarter is located in "township of casting" the fourth development zone of Botou city of Hebei province. The company is a professional manufacturer which can research, produce and sale. Meanwhile, we focus on researching, producing and selling of heating valves after nearly 20 years of development and innovation. The company can provide projects of designing, installing and adjusting of HVAC (heating, ventilating, Air-condition) system based on major products – heating valves.

Our company has passed ISO9001:2000 quality system certification, CE certification, special equipment license of the People's Republic of China, the occupational health and safety management system certification, environmental management system certification.

Our main product cover welded ball valve, gate valve, butterfly valve, dynamic balance valve include brass, stainless304, 316, 316L, cast iron, ductile cast iron, and customized, install in different environment and different condition of pressure and temperature. Using widely in chemistry, power, metallurgy, water conservation and controlling, irrigation, construction, heating system, and water drainage fields.

The company keep researching high-tech heating products with new technology, new arts and new materials and make a great achievement to perfect and develop the HVAC system. The products are selling well in kinds of large and medium-sized enterprises and are exported to more than 10 countries and regions like Russia, the United States, European, Japan, South Korea, etc. HEBEI TONGLI SELF-CONTROL VALVE CO., LTD. is willing to make progress and magnificence with various circles of society based on "cooperate sincerely and create a mutual beneficial". Hebei tongli brand has enjoyed a great reputation amount our customers.

Office building



Processing Equipment



Processing plant



Valve Testing Center



The company has passed ISO9001-2008 international quality system certification

# Product **Catalog**

1-----*Ball valve*

*Q61f16 weld ball valve*

3-----*Brass ball valve*

*Floating ball valve*

4-----*2 piece design ball valve*

HEBEI TONGLI VALVE

5-----*Gate valve*

6-----*Butterfly valve*

*Wafer butterfly valve*

*Electric butterfly valve*

8-----*Knife valve*

8-----*Pressure balancing valve*

9-----*Check valve*

9-----*Global valve*

10-----*Y-type strainer*

# PROCESSING PLANT



The company has passed ISO9001-2008 international quality system certification



## STANDARDS, SPECIFICATIONS AND MATERIALS

JKTL fully welded ball valves conform to one or more of the following specifications for pressure, temperature ratings and dimensions: ASME/ANSI, ISO 14313/API 6D, ISO 10423/API 6A, ISO 14723/API 6DSS, DIN, AFNOR, British standards, ISO 9000 and API Q1.

### Trim Materials for Standard Valves

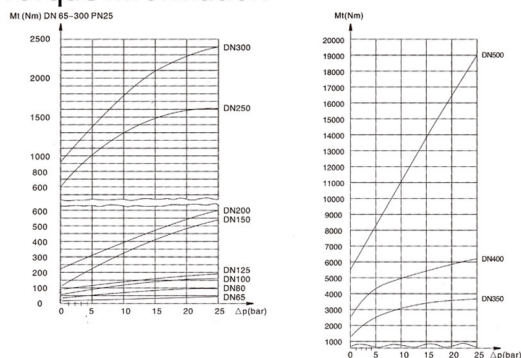
Pressure range	ASME/ANSI Class 150 to 2500
Temperature range	-20° F to 250° F (-29° C to 121° C)
Body	ASTM A350 Gr. LF-2(M)
End connection	ASTM A350 Gr. LF-2(N)
Ball	ASTM A694 (i.e. F50(M) Chrome plated or ENP
Seat ring	AISI 1040
Seat load spring	AISI 1040
Stem seals	PTFE
Lip seals	PTFE
Seat ring insert	Nylon

Other trims are available upon request.

## Materials

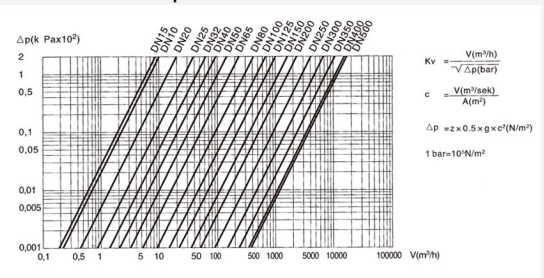
Materials used in ball valve construction are equivalent at all JKTL manufacturing plants. However, the availability of local supplies, the need to conform to national standards and to offer various trims may necessitate some variations. In corrosive applications, valve trims may be offered using various types of alloys and stainless steels. For more information on material specifications and properties, contact us directly

## Torque Information



The torques stated are for guidance only; they have been obtained by measuring on new ball valves. The torque is to be understood as the pull-off torque applicable for a closed, but recently activated ball valve. The values stated may rise to a factor of 1.5 after a long period of not being in service.

## Pressure Drop Graph



Ball valve in fully open position.

Medium: water

Density in 1000kg/m<sup>3</sup>

## KVS

DN	10	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	500
Kv	7	6	14	28	43	64	100	160	280	450	650	1100	1500	2770	4620	7250	10540	11780
Ax10 <sup>4</sup>	0.79	0.79	1.77	3.14	4.90	8.04	12.56	19.63	33.18	50.27	78.54	122.72	176.71	314.16	490.87	706.86	962.11	1256.6
z	0.32	0.44	0.41	0.37	0.33	0.40	0.40	0.39	0.36	0.32	0.33	0.32	0.36	0.33	0.29	0.24	0.22	0.21

### Sign explanation

Kv: m<sup>3</sup> water per hour at pressure drop 1 bar.

c: Flowrate of the media in m<sup>3</sup>/sec.

V: Actual flow volume.

A: The area of flow in M<sup>2</sup> of the ball valve in question.

z: Coefficient of resistance.

g: Density in kg/m<sup>3</sup>

## Fire-Tested for Safety

JKTL fully welded ball valves can be supplied to API 6FA, API 607 and ISO 10497 standards. If industry standards change or customer requirements vary from the above, please contact your sales representative.

## Trunnion Mounted Ball Allows Low-Torque Operation

Regardless of size or pressure rating, every JKTL fully welded ball valve is trunnion mounted. High-strength forged stems are located in PTFE impregnated stainless steel bearings for smooth, accurate operations. Trunnion mounted stems absorb the thrust from line pressure, preventing excess friction between the ball and seats, so even at full rated working pressure, operating torque stays low.

## Test Valve Integrity

When the valve body is vented, the seat seal's integrity is verified. This test can be performed with the valve open or closed. Valve performance can also be validated by verifying valve seat seal integrity.

## Features and Benefits

### Upstream Sealing

At low pressure, seat-to-ball contact is maintained by Belleville springs. At higher pressures, seat contact is reinforced by line pressure.

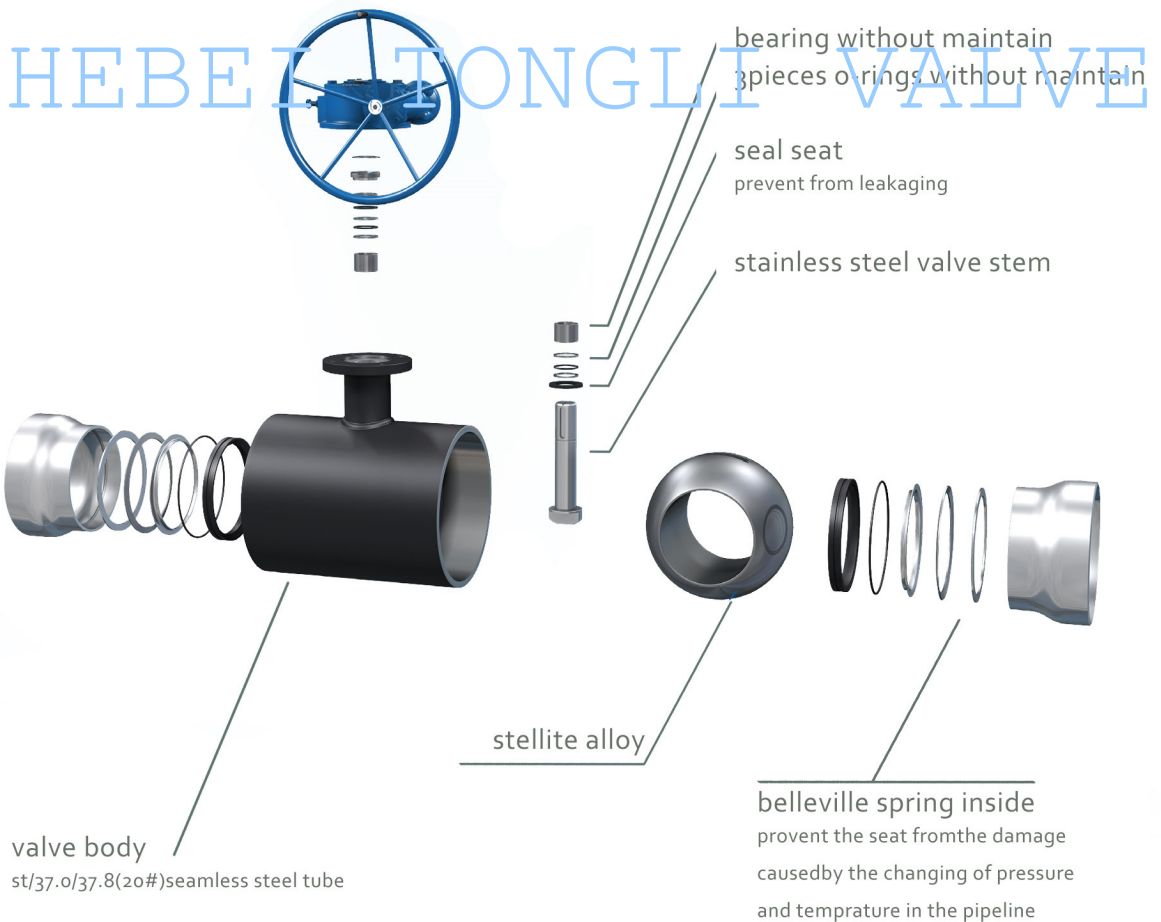


# ADVANTAGE

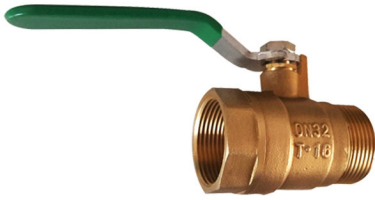
## WELDED BALL VALVE



Double Seal



## Brass ball valve



### Product description

Description of valve part	Material
Body	Forged brass body full port
End Connection	Threaded ends(1/2"TO4"),600WOG,150 SWP
Ball	S5304
Seal on stem	EPDM or plastic
Stem	Steel
Ball Seal	PTFE
Nut for handle	Steel or brass or iron
Handle	Steel
Forged Brass ball valve Material	Leaded brass C37700,Lead free brass C46400
Forged Brass ball valve through the Certification	CSA FM UL IAPMO-CUPC,NSF61,AB1953

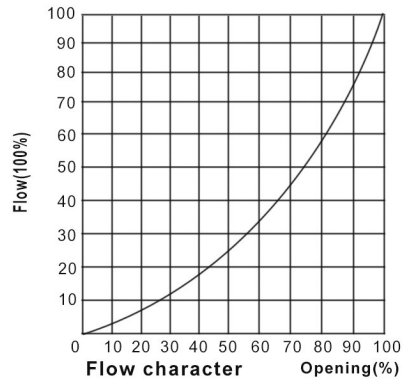
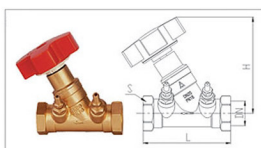
### Unit weight sheet

Size(inch)	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Weight (gram)	136	210	380	620	1020	1413

## Automatic balance valve



Performance parameter	Material
Product model: SP15F	
Specification: DN15-50mm	
Nominal pressure: 1.6Mpa .1.6Mpa	
Temperature: 0-120°C	Valve body/valve cover: brass
Service: clean water	Valve core: stainless steel/brass
Characteristic curve: equal percentage curve	Seal gasket/stuffing: PTFE



Outline dimension		(Model): SP15F-16T			(Unit) : mm
NO	DN	Size	L	S	H
9501	15	1/2	90	29	92
	20	3/4	93	34	94
	25	1	102	41	98
	32	5/4	95	49	109

Size (Inch)	Weight(KG)
1/2	0.343
3/4	0.37
1	0.48
1 1/4	0.6
1 1/2	0.92
2	1.2

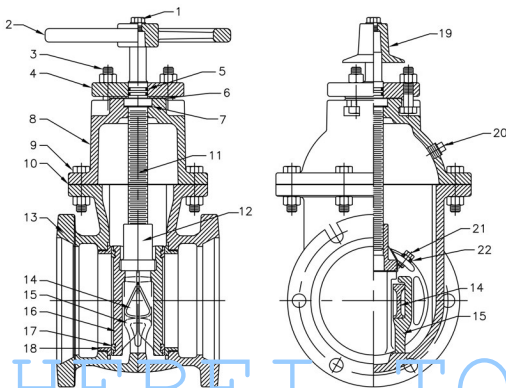
The weight can be reinforced if necessary

With shut-off and balancing valve can stop the flow move through the pipeline medium, to make the restriction of the maximum coolant flow passing through the adjustable section of the system by changing the valve capacity by limiting the degree of opening (the value of the stock recovery) . measure the amount of coolant flowing through the section of the system, and connect impulse tube from regulators: differential pressure Restriction within the allowable values for a variety of devices, such as radiator thermostats, excludes noise level at their work. exception static balancing systems: hydraulic balancing interconnected circulating rings pipeline system on which you installed automatic balancing valves, is carried out automatically without the use of labor-intensive methods of piping calculation and special commissioning. Increased hydraulic stability systems: Application of automatic balancing eliminates the influence each other existing in the system control devices and the occurrence of pressure fluctuations in the distribution pipeline network. Automatic balancing valves used in conjunction with the shut-off valve . with the help of the valve can restrict the flow medium through the branch system within the calculated value by fixing its bandwidth.

Installation: Balancing valves should be installed in the flow pipe so that the direction of fluid flow to coincide with the direction of the arrows in their housings valves pulse tube that before installation to be purged. Other requirements are determined by the specific conditions of installation. Hydraulic test: Pipeline system with balancing valves tested at a water pressure up to 25 bar. Before the hydraulic test is necessary to ensure the same static pressure on both sides of the membrane balancing valves. To this should be installed between the pulse tube balancing and shut-off valves. Otherwise valves will be put out of action.

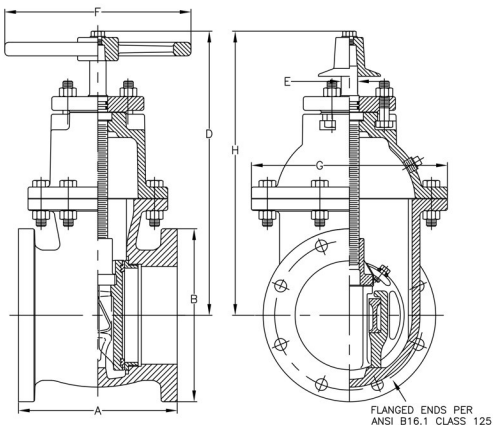




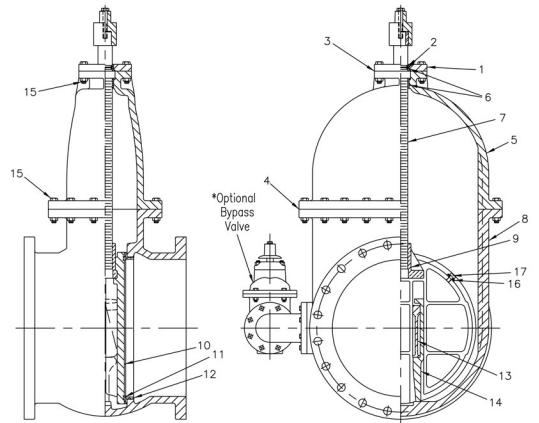

**Gate valve from 2"-12"**


QTY	DESCRIPTION	MATERIAL
1	1 Capscrew & Washer	304 Stainless Steel
2	1 Handwheel	Cast Iron, ASTM A126 Class B
3	1 Bolts & Nuts (O-Ring Plate)	304 Stainless Steel
4	1 O-Ring Plate	Cast Iron, ASTM A126 Class B
5	2 O-Rings (O-Ring Plate)	Rubber
6	1 Gasket (O-Ring Plate)	Composition
*7	1 Low Torque Bearing	Delrin
8	1 Cover	Cast Iron, ASTM A126 Class B
9	1 Bolts & Nuts (Cover)	304 Stainless Steel
10	1 Gasket (Cover / Body)	Composition
11	1 Non-Rising Stem	Low Zinc Bronze
12	1 Stem / Gate Nut	Bronze
13	1 Body	Cast Iron, ASTM A126 Class. B
14	2 Wedge	Bronze
15	2 Hook	Cast Iron, ASTM A126 Class B
16	2 Gate / Disc	Cast Iron, ASTM A126 Class B
17	2 Gate / Disc Ring	Bronze
18	2 Case / Body Ring	Bronze
19	1 Operating Nut	Cast Iron, ASTM A126 Class B
20	1 Pipe Plug	Steel with Teflon
21	4 Capscrew on 10" & 12" Only	Silicon Bronze
22	2 Straps on 10" & 12" Only	Stainless Steel

\*DELIN BEARING, PART 7, USED ON 4"-12" ONLY  
 2"-3" Has all bronze gates, without rings or hooks. Wedge is one piece bronze

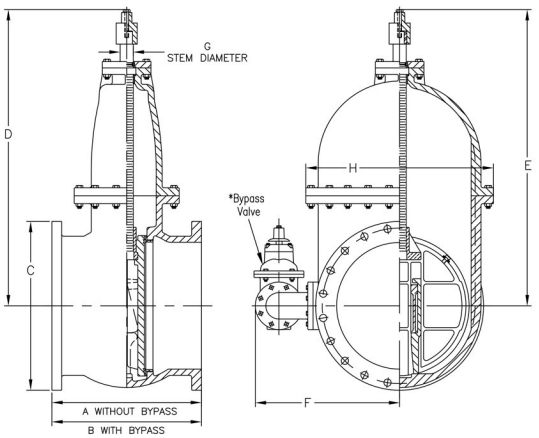


VALVE SIZE	A	B	C	D	E	F	G	H	Turns to Open
2	7	6	5	11 3/4	7/8	7 1/4	5 7/8	11 3/4	5
2 1/2	7 1/2	7	5 1/8	13	7/8	7 1/4	6 3/8	13	6
3	8	7 1/2	5 1/2	14	7/8	7 1/4	7 1/8	14	7
4	9	9	7	15 1/4	1 1/8	10	9	15 1/4	15
5	10	10	7 3/4	16 3/4	1 1/8	10	10 7/8	16 3/4	18
6	10 1/2	11	9	18 1/2	1 1/4	12	12 5/8	18 1/2	21
8	11 1/2	13 1/2	10	21 5/8	1 3/8	14	15 1/4	21 5/8	27
10	13	16	10 5/8	28 1/4	1 1/2	18	18 1/4	28 1/4	33
12	14	19	11 1/4	30 3/4	1 1/2	18	20 1/4	30 3/4	39

**Gate valve from 14"-36"**


QTY	DESCRIPTION	MATERIAL	QTY	DESCRIPTION	MATERIAL
1	1 O-ring Plate	Cast Iron, ASTM A126 Class B	10	2 O-Rings	Cast Iron, ASTM A126 Class B
2	2 O-rings	Buna-N	11	2 Gate Ring	Bronze, ASTM B584 Alloy 836
3	1 Stuffing Box Gasket	Composition	12	2 Case Ring	Bronze, ASTM B584 Alloy 836
4	1 Neck Flange Gasket	Buna-N	13	2 Wedge	Bronze, ASTM B584 Alloy 836
5	1 Cover	Cast Iron, ASTM A126 Class B	14	2 Hook	Cast Iron, ASTM A126 Class B
6	2 Bushing	Bronze, ASTM B584 Alloy 836	15	2 Bolts & Nuts	Rust Proof Steel
7	1 Stem	Bronze, ASTM B584 Alloy 836	16	2 Strap	Bronze, ASTM B584 Alloy 836
8	1 Body	Cast Iron, ASTM A126 Class. B	17	4 Peg	Bronze, ASTM B584 Alloy 836
9	1 Stem Nut	Bronze, ASTM B584 Alloy 836			

\*OPTIONAL BYPASS VALVE: (14"=2") (16"-20"=3") (24"=4") STANDARD ON: (30"=4") (36"=6")  
 GEARING RECOMMENDED ON 14"-24" VALVES, MANDATORY ON 30" & 36"



VALVE SIZE	A	B	C	D	E	F	G	H	Turns to Open
14	15 3/4	23	21	36 1/2	38 3/4	22	1 7/8	23 3/8	45
16	17	23	23 1/2	40 3/4	43 1/2	22	1 7/8	25 3/4	52
18	19	24	25	43 1/4	46	26	2 1/8	27 3/4	58
20	20	24	27 1/2	47 1/4	50	26	2 1/8	32 7/8	64
24	23	28 1/2	32	55	56 3/4	30	2 1/2	35 3/4	76
30	25	32 1/2	38 3/4	64 3/4	66 1/2	30	2 3/4	45 3/4	63
36	27	36	46	75 3/8	77 3/8	36	3	56 1/4	75

\*OPTIONAL BYPASS VALVE: (14"=2") (16"-20"=3") (24"=4") STANDARD ON: (30"=4") (36"=6")  
 GEARING RECOMMENDED ON 14"-24" VALVES, MANDATORY ON 30" & 36"

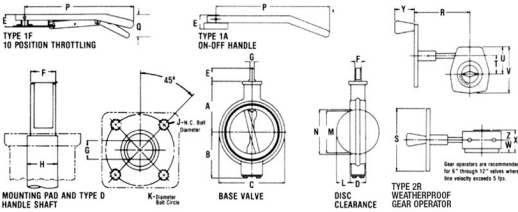
**Notes:**

- Flanges are faced and drilled to ANSI Class 250 Standard
- Call Factory for Special Applications
- Contact Factory for availability, lead time, dimensional drawings on 36" through 48"
- Contact Factory for Flanges drilled to ANSI Class 125lb standard

# WAFER BUTTERFLY VALVE



## 2"-12" Valves



Dimension Reference	Valve Size (Inches/mm)									
	2/50	2.5/65	3/75	3.5/90	4/100	5/125	6/150	8/200	10/250	12/300
A	1.70	4.16	4.41	N/A	4.88	5.94	6.50	7.47	9.38	10.41
B	3.22	3.75	4.05	N/A	5.50	6.91	6.00	6.14	6.95	9.66
C	4.13	.88	5.38	N/A	6.88	7.75	8.75	10.88	13.38	16.00
D	1.63	.75	1.75	N/A	2.00	2.14	2.13	2.50	2.50	3.00
E	1.31	1.31	1.31	N/A	.31	1.31	1.69	1.69	2.00	2.00
F	.59	.59	.59	N/A	.59	.88	.88	1.06	1.06	1.50
G	.50	.50	.50	N/A	.50	.50	.63	.63	.75	.75
H	.69	.88	.88	N/A	.88	.88	1.06	1.06	1.38	1.38
J	.25	.25	N/A	.25	.25	.25	.38	.38	.38	.38
K	1.81	1.81	1.81	N/A	1.81	1.81	2.34	2.34	2.63	2.63

Dimension Reference	Valve Size (Inches/mm)									
	14/350	16/400	18/450	20/500	22/550	24/600	26/650	28/700	32/800	36/900
L	.38	.50	.75	N/A	1.13	1.56	1.94	2.69	3.75	4.50
M	1.77	2.06	2.69	N/A	3.59	4.72	5.55	7.44	9.58	11.52
N	2.41	2.72	3.20	N/A	4.19	5.17	5.91	7.81	9.89	11.89
Approx Wt. (Ball Cast Iron Body)	5	7	9	-	14	17	23	37	59	80

Bolt Size	Valve Size (Inches/mm)									
	83 x 4.00	83 x 4.50	83 x 4.50	N/A	83 x 4.50	75 x 5.50	75 x 5.50	75 x 6.00	88 x 6.00	88 x 7.00
No. Required	4	4	4	-	8	8	8	8	12	12

Operator	Valve Size (Inches/mm)									
	9.94	9.94	9.94	N/A	9.94	9.94	15.00	15.00	16.00	16.00
P	9.94	9.94	9.94	N/A	9.94	9.94	15.00	15.00	16.00	16.00
Q	3.34	3.34	3.34	N/A	3.34	3.34	3.66	3.66	3.66	3.66
R	6.88	6.88	6.88	N/A	6.88	6.88	7.50	7.50	8.00	8.00
S	6.00	6.00	6.00	N/A	6.00	6.00	8.00	8.00	8.00	8.00
T	2.36	2.36	2.36	N/A	2.36	2.36	2.36	2.36	3.00	3.00
U	3.50	3.50	3.50	N/A	3.50	3.50	3.50	3.50	4.38	4.38
V	5.93	5.93	5.93	N/A	5.93	5.93	5.93	5.93	7.50	7.50
W	5.25	5.25	5.25	N/A	5.25	5.25	5.25	5.25	6.75	6.75
X	2.92	2.92	2.92	N/A	2.92	2.92	2.92	2.92	3.27	3.27
Y	2.63	2.63	2.63	N/A	2.63	2.63	2.63	2.63	2.63	2.63
Z	1.69	1.69	1.69	N/A	1.69	1.69	1.69	1.69	1.88	1.88
Approx Wt. (Ball 28/28mm Operator)	7	7	7	N/A	7	7	8	8	13	13

## 14"-36" Valves

Dimension Reference	Valve Size (Inches/mm)									
	14/350	16/400	18/450	20/500	22/550	24/600	26/650	28/700	32/800	36/900
A	12.63	14.00	14.75	15.00	17.98	17.50	20.13	22.75	23.75	24.50
B	14.25	15.63	16.63	17.88	18.00	19.00	20.81	21.83	22.70	23.28
C	18.75	21.25	22.75	25.00	27.25	29.50	31.75	34.00	36.00	38.50
D	3.75	4.13	4.63	5.13	5.00	5.00	6.50	6.50	7.00	8.50
E	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	4.75
F	1.75	1.75	1.75	2.50	2.50	2.50	2.50	2.50	2.50	3.00
G	.38x2.5	.38x2.5	.38x2.5	.63x2.94	.63x2.94	.63x2.94	.63x2.94	.63x2.94	.63x2.94	.75x3.0
H	1.75	2.00	2.25	2.50	2.50	2.50	3.00	3.00	3.00	3.50
J	.63	.63	.63	.63	.63	.63	.75	.75	.75	.75
K	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50

Bolt Size	Valve Size (Inches/mm)									
	14/350	16/400	18/450	20/500	22/550	24/600	26/650	28/700	32/800	36/900
No. Required	8	12	16	16	16	16	20	24	24	28

Operator	Valve Size (Inches/mm)									
	100NC x 3.00	100NC x 3.00	150NC x 3.00	150NC x 3.00	150NC x 3.00	200NC x 4.00	200NC x 4.00	250NC x 3.25	250NC x 3.50	300NC x 3.75
No. Required	8	8	8	8	8	8	8	8	8	8

Operator	Valve Size (Inches/mm)									
	9.75	9.75	9.75	17.25	17.25	17.25	17.84	17.84	17.84	17.84
R	9.75	9.75	9.75	17.25	17.25	17.25	17.84	17.84	17.84	17.84
S	12.75	1.75	12.75	24.00	24.00	24.00	24.00	24.00	24.00	24.00
T	4.83	4.83	4.83	5.38	5.38	5.38	2.69	2.69	2.69	2.69
U	6.63	6.63	6.63	7.63	7.63	7.63	9.44	9.44	9.44	9.44
V	10.13	1.13	10.13	11.13	11.13	11.13	14.94	14.94	14.94	14.94
W	9.10	9.00	9.00	10.81	10.81	10.81	7.00	12.00	12.00	12.00
X	5.00	5.00	5.00	5.14	5.14	5.14	7.38	7.38	7.38	7.38
Y	4.50	4.50	4.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Z	2.88	2.88	2.88	2.88	2.88	2.88	4.00	4.00	4.00	4.00
Approx Wt. (Ball 28/28mm Operator)	70	70	70	90	90	90	90	210	210	210

## Materials sheet for selection

Part Name	Materials
Body	Cast Iron: ASTM A126CL. B , DIN1691 GG25, EN 1561 EN-GJL-200, GB12226 HT200; Ductile Cast Iron: ASTM A536 65-45-12, DIN 1693 GGG40, EN1563 EN-GJS-400-15, GB12227 QT450-10; Stainless Steel: ASTM A351 CF8, CF8M, CF3, CF3M; Carbon Steel: ASTM A216 WCB
Stem	Zinc Plated Steel; Stainless Steel: ASTM A276 Type 316, Type 410, Type 420, ASTM A582 Type 416;
Taper Pin	Stainless Steel: ASTM A276 Type 304, Type 316, EN 1.4501;
Seat	NBR, EPDM, Neoprene, PTFE, Viton;
Disc	Ductile Cast Iron (Nickel plated): ASTM A536 65-45-12, DIN 1693 GGG40, EN1563 EN-GJS-400-15, GB12227 QT450-10; Stainless Steel: ASTM A351 CF8, CF8M, CF3, CF3M, EN 1.4408, 1.4469; 1.4501; AL-Bronze: ASTM B148 C95400;
O-Ring	NBR, EPDM, Neoprene, Viton;
Bushing	PTFE, Nylon, Lubricated Bronze;
Key	Carbon Steel

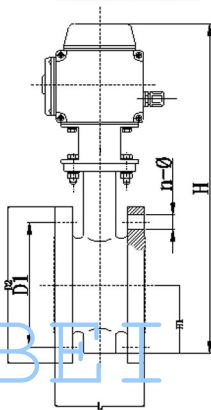
This buyer can select material as per materials list. The customer may mark the material and temperature used, Our company may select instead. When the medium and temperature is special, please consult with our company.

## Seat Temperature Ratings

Material	NBR	Neoprene	EPDM	Hypalon	Viton	PTFE
Temperature Ratings	°C -20~100	-40~100	-40~120	-32~135	-12~230	-50~200
	°F -4~212	-40~212	-40~248	-25.6~275	10.4~446	-58~392

Seat materials are capable of withstanding lower temperatures without damage. However, the elastomer becomes hard and torques increase. Some flow media may further restrict the published temperature limits or significantly reduce seat life.

# ELECTRIC BUTTERFLY VALVE



## Actuator Mounting

Note:

- ✦ Prior to mounting, the part-turn actuator must be checked for any damage
- ✦ Damaged parts must be replaced by original spare parts

Mounting is most easily done with the valve shaft pointing vertically upward. But mounting is also possible in any other position; the actuator may be mounted in any position.

The QT-series electric actuators are supplied with a female drive output. The ISO5211 bolt patterns are provided for actuator mounting. The actuator drive bush is removable for ease of machining.

It is mandatory for the actuator to be firmly secured to a sturdy mounting bracket or directly mounted to the valves' ISO mounting pad. High tensile bolts or studs with spring locking washers must be used.

The valve output shaft must be in lined with the actuator output drive to avoid side-loading the shaft. To avoid backlash, flexibility in the mounting bracket or mounting should not be allowed.

### CAUTION:

- ✓ Do not attempt to work on your QT actuator without first shutting off the incoming power
- ✓ Do not attach ropes or hooks to the hand wheel for the purpose of lifting by hoist

## Installation And Maintenance Tips

### CAUTION:

- ✓ A regular inspection and maintenance should be performed by qualified and trained personnel
- ✓ When working in potentially explosive areas, be sure to comply with the standard EN 60079-14 "Electrical Installations in Hazardous Areas".
- ✓ Working on the actuator that is in open position and under voltage must only be performed if it is assured that there is no danger of explosion for the duration of the work.
- ✓ Pay attention to national regulations

For any installation and maintenance work, the followings should be noted:

- Check the quarter turn actuators visually. Ensure that no external damage or changes are visible. The electrical cables must not be damaged and wired correctly.
- Cable entries, cable glands, plugs, etc. have to be checked whether they are correctly tightened and sealed.
- Check that the Ex-connections are correctly fastened.
- Check for the possible discoloration of the terminals and windings as it may indicate an increased temperature.
- Check the flame path gaps of the flameproof enclosures for any dirt and corrosion. Since the dimensions of all Ex gaps are strictly defined and inspected, no mechanical work shall be performed on them.
- All cables and motor protection elements have to be checked.
- During the maintenance if any defects are detected that may affect the safety, repair measures have to be taken immediately.
- Any kind of surface coating for the gap surface is not permitted.
- When replacing parts, seals, etc., only original spare ones must be used.

### WARNING:

- ✦ Flameproof Enclosure! Before opening, ensure the absence of any gas and voltage
- ✓ Treat cover with care. Gap surfaces must not be damaged or dirtied in any way. Do not jam the cover during fitting.

The size and weight of Flange seal butterfly valve with actuator (ANSI)

SIZE	SPECIFICATION	D1		D2		H	H1	L	N-Ø
		1.0MPa	1.6MPa	1.0MPa	1.6MPa				
40 1.5"	TL-5	98.4	125	251	75	106	4-3/4"	1.0MPa	
50 2"	TL-5	120.7	150	359	83	108	4-3/4"		
65 2.5"	TL-5	139.7	180	380	93	112	4-3/4"		
80 3"	TL-05	152.4	190	396	100	114	4-3/4"		
100 4"	TL-10	190.5	230	447	110	127	8-3/4"		
125 5"	TL-10	215.9	255	471	125	140	8-7/8"		
150 6"	TL-20	241.3	280	549	143	140	8-7/8"		
200 8"	TL-20	298.5	345	602	170	152	8-7/8"		
300 12"	TL-50	362	405	664	198	165	12-1"		
350 14"	TL-100	431.8	485	761	223	178	12-1"		
400 16"	TL-100	476.3	535	832	253	190	12-1 1/4"		
450 18"	TL-200	539.8	595	899	283	216	16-1 1/4"		
450 18"	TL-200	577.9	635	969	308	222	16-1 1/4"		
500 20"	TL-200	635	700	1033	345	229	20-1 1/4"		

Model	Max Output Nm	Operating Time(90°) S	Max Bore mm	F-Class w	Rated Current (A) 50/60HZ				Handwheel Rotation N	Weight Kg
					Single Phase 110V	Single Phase 220V	Three Phase 380V	Three Phase 440V		
QT-05	50	18/22	Ø20	20	1.1/0.95	0.55/0.54	0.3/0.3	N/A	10	7.5
QT-08	80	18/22	Ø20	20	1.1/0.95	0.55/0.54	0.3/0.3	N/A	10	7.5
QT-10	100	18/22	Ø20	20	1.1/0.95	0.55/0.54	0.3/0.3	N/A	10	7.5
QT-15	150	21/25	Ø22	40	1.65/1.67	0.88/0.84	0.31/0.31	0.30/0.31	11	17.3
QT-20	200	21/25	Ø22	40	1.65/1.67	0.88/0.85	0.31/0.31	0.30/0.31	11	17.3
QT-30	300	26/31	Ø35	60	1.85/1.86	0.92/0.92	0.35/0.35	0.34/0.34	13.5	22
QT-50	500	26/31	Ø35	90	3.6/3.62	1.55/1.58	0.59/0.59	0.58/0.58	13.5	23
QT-60	600	26/31	Ø35	120	3.65/3.62	1.60/2.20	0.60/0.59	0.59/0.58	13.5	23
QT-80	800	31/37	Ø45	120	4.2/4.1	2.15/2.20	0.85/0.85	0.79/0.79	16.5	29
QT-120	1200	31/37	Ø45	180	4.2/4.1	2.35/2.30	0.87/0.87	0.81/0.81	16.5	29
QT-200	2000	93/112	Ø65	180	4.2/4.1	2.15/2.20	0.85/0.85	0.79/0.79	49.5	75
QT-300	3000	93/112	Ø65	180	4.2/4.1	2.35/2.30	0.87/0.87	0.81/0.81	49.5	75

Enclosure Rated	Weatherproof IP67, NEMA 4 & 6
Enclosure	High grade aluminum alloy, corrosion coated
Power Supply	110 / 220V AC 1 Ph 50/60Hz 12 / 24V DC 50/60Hz
Duty Type	S4 70% / S2 30min (IEC 60034)
Motor	Squirrel caged induction motor
Limit Switches	2 x open/close SPDT, 250V AC 10A rating
Auxiliary Limit Switches	2 x open/close SPDT, 250V AC 10A rating
Torque Switches	Open/Close SPDT, 250VAC 10A Rating ( Except QT10 )
Stall Protection	Built-in thermal protection
Travel Angle	90 degree +/- 10%
Indicator	Continuous position indicator
Manual Override	Declutchable manual override
Self Locking	By means of worm gear
Mechanical Travel Stops	2 x external adjustable mechanical travel stops
Space Heater	10W ceramic housed
Conduit Entries	2 x PF3/4"
Lubrication	Grease moly EP
Ambient Temperature	-20 °C ~ +60 °C
External Coating	Dry powder polyester, thickness Max. of 2mm





**Knife Gate Valve Model**

The Knife Gate Valve is truly a high performance knife gate valve design. This valve provides zero leakage bi-directional shut-off, has mechanically retained seals, has a compact non-rising stem design, and can be repacked in service under full pressure. The chest and seating areas of the valve are self-cleaning. The reduced chest area, minimal gate arc, and contoured flushing corners in the body prevent jamming by eliminating material build-up in the chest, body and seating area. The gate seals against a combination metal and resilient seat and is guided for the full stroke length of the valve. The top "transverse" seal is replaceable while in operation under full pressure. The valve is tested and rated for zero leakage (liquid or gas) downstream and to atmosphere.

**Compare these unique features**

- Transverse seal eliminates stuffing box and permits repacking under full pressure and without system shut-down.
- Contoured interior body promotes flushing action to prevent build-up of process media in the seating area.
- Solid steel or stainless steel topworks provide maximum strength to prevent damage due to operator abuse or vibrating conditions.
- Non-rising stem design saves space and reduces stem nut repair problems.
- Mechanically retained resilient seat provides dual metal-to-metal and resilient seating for zero leakage bi-directional shut-off from absolute vacuum to rated valve pressure.
- ISO 9001: 2008/PED-Annex III (Mod H)
- Bi-directional design. Gate is guided and supported for smooth operation throughout the entire stroke with flow in both directions.

**Characteristics**

- Solid 316 SS cast lagged body
- 316 SS hard chrome finished gate
- Atlas® seals standard
- Phonic Scraper Blades standard
- 2" - 36" size
- TAPPi & MSS-SP81 Face-to-Face
- 150 psi CWI design
- 2" - 12" 150 psi shut-off
- 14" - 36" 90 psi shut-off
- High pressure ratings available
- One body, gate, scraper and seal materials available
- All sizes of actuators available

It is specifically designed to meet the requirements of tough slurry, chemical and dry material handling applications. Typical applications include, but are not limited to, Pulp Stock, Air Conveyed Fly Ash and Cement, Waste Water, Abrasive Slurry and Sludge. These valves are successfully applied in the Pulp & Paper, Mining, Power, Steel, Municipal, Automotive, Chemical, Refining and Bulk Handling industries. There are applications for the VL product in virtually all industries.

combines rugged construction with time-tested design features found in no other knife gate valve. If you are experiencing knife gate valve failures, try a precision built Wey Knife Gate Valve. You will wish all of your knife gate valves were Wey High Performance Knife Gate Valves.



**Actuator Options**

- Handwheel
- Chainwheel
- Square drive nut
- Manual level gear
- Pneumatic cylinder
- Hydraulic cylinder
- Electric actuator

Note: Consult factory for details

**Accessories**

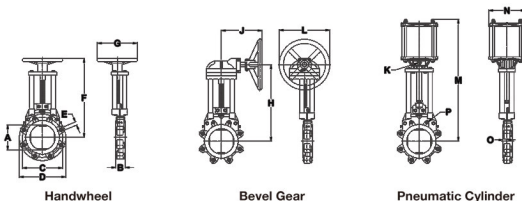
- Solenoid
- Mechanical limit switches
- Proximity switches
- Ni-hard wear ring
- Pneumatic positioner
- Electronic positioner
- V-Port insert
- Lock-out
- Position indication scale
- OSHA yoke guard
- Scale cutter
- Shear cutter
- Powder-Pac option

**Sizes and Dimensions**

For optional Cylinder sizes and dimensions, consult the factory.

K = Cylinder port size 4" - 12" typ. Sisiag Cyl.  
 N = Cylinder diameter not actual outside dimension  
 Note: Standard Cylinders are shown (other sizes are available)  
 O = Depth of Blind Tapped Holes in Chest Area of Valve  
 P = Number of Blind Tapped Holes in Chest Area of Valve

Note:  
 Bevel Gears (3:1) are recommended for 6"-10" Valves  
 Bevel Gears (4:1) are recommended for 12"-20" Valves  
 Bevel Gears (8:1) are recommended for 24" and larger Valves  
 Consult factory for special applications.

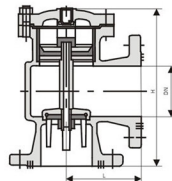


Valve	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
2"	1.97	1.97	4.75	6.00	5/8"	10.90	6.30	—	—	3/4"	—	15.25	4"	—	—
3"	3.15	2.00	6.00	7.50	5/8"	12.44	7.87	—	—	1/4"	—	17.80	4"	—	—
4"	3.94	2.00	7.50	9.00	5/8"	15.47	7.87	—	—	1/4"	—	20.75	4"	0.66	4
6"	5.90	2.25	9.50	11.00	3/4"	19.57	11.81	18.15	11.50	1/4"	12	27.25	6"	0.94	4
8"	7.84	2.75	11.75	13.50	3/4"	22.72	11.81	21.29	11.50	1/4"	12	32.40	6"	1.12	4
10"	9.87	2.75	14.25	16.00	7/8"	26.85	11.81	24.84	11.50	1/4"	16	38.90	8"	0.75	8
12"	11.81	3.00	17.00	19.00	7/8"	29.80	15.75	28.93	14.75	3/8"	16	44.21	10"	0.63	8
14"	13.78	3.00	18.75	21.00	1"	33.30	15.75	33.42	14.75	3/8"	18	54.25	10"	0.78	8
16"	15.75	3.50	21.25	23.50	1"	36.81	15.75	35.74	14.75	3/8"	18	61.50	12"	0.94	8
18"	17.72	3.50	22.75	25.00	1-1/8"	42.32	19.68	40.75	14.75	3/8"	18	67.50	12"	0.98	12
20"	19.68	4.50	25.00	27.50	1-1/8"	45.81	19.68	44.66	16.75	3/4"	24	74.25	14"	1.37	12
24"	23.62	4.50	29.50	32.00	1-1/4"	54.17	24.75	53.75	23.50	3/4"	24	85.25	16"	1.22	12
30"	29.52	4.62	36.00	38.70	1-1/4"	—	—	63.77	23.50	3/4"	24	97.50	16"	0.98	20
36"	35.43	4.62	42.75	46.00	1-1/2"	—	—	84.50	23.50	3/4"	30	111.50	18"	1.77	20

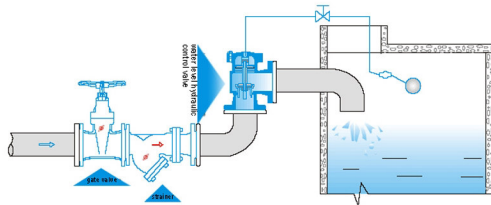
**water level control valve for engineering**



**Size and dimension**



DN	40	50	65	80	100	125	150	200	250	300	350
L	107	115	125	135	146	161	180	215	255	285	325
H	235	243	268	280	303	318	400	490	515	663	750



**Size and dimension**

**Material:** casting iron or stainless steel or customized

**Application:** water tower, water tank, pool

This valve with automatic opening and closing line to control the function of water level, applicable to industrial and mining enterprises, all kinds of water tower automatic water supply system in civil building, and can be used as an atmospheric boiler circulating water control valve, the valve body volume is small, simple installation, high sensitivity, small head loss, no water hammer phenomenon, due to the small floating ball control can improve the utilization rate of water tower for new water tower due to the floating ball reduced volume and make the water tower height needed for the upper left float freely floating thus decrease the cost of the water tower, overcoming the old lever floating ball valve size is large, floating ball is easy to damage, low working pressure, defects such as a large number of surplus water is the most ideal products new towers, and it will also apply to the water tank.

we took the standard of API to produce the valve, totally can satisfied all the installation conditions.



## Ball check valves

### General characteristics

- structure in GJL-250 cast iron with rubber seals include
- sinking ball in NBR rubber
- sealing ensured by rubber on rubber contact
- stainless steel metal fasteners
- epoxy paint resistant to aggressive liquids
- full free passage
- easily removable cover for plant inspection
- can be installed in a horizontal or vertical position

### Models

GAS 1 1/4" thread  
 GAS 1 1/2" thread  
 GAS 2" thread  
 DN65 PN10-16 flanged  
 DN80 PN10-16 flanged  
 DN100 PN10-16 flanged  
 DN1125 PN10 flanged  
 DN150 PN10-16 flanged  
 DN200 PN10-16 flanged  
 DN250 PN10-16 flanged  
 DN300 PN10-16 flanged  
 DN350 PN10-16 flanged

### Operating limits

Ambient temperature and treated liquid: 0 to +40°C  
 pH of treated liquid: 6 ÷ 11  
 Density of treated liquid: 1 kg/dm<sup>3</sup>

Contact Zenit if you have requirements that are outside the usage limits

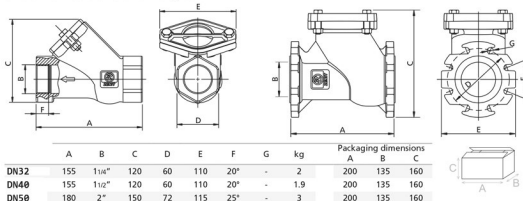
### Advantages

- lower noise level
- possibility of easily restoring the coupling between ball and lip closure
- there is no need to purchase commercial gaskets for between the flanges

### Reference standards

ANSI. DIN. ISO

#### Overall dimensions and weights



DN	Dimensions (mm)							kg	Packaging dimensions (mm)		
	A	B	C	D	E	F	G		A	B	C
DN32	155	114*	120	60	110	20*	-	2	200	135	160
DN40	155	112*	120	60	110	20*	-	1.9	200	135	160
DN50	180	2"	150	72	115	25*	-	3	200	135	160

DN	Dimensions (mm)							kg	Packaging dimensions (mm)		
	A	B	C	D	E	F	G		A	B	C
DN65	240	65	220	145	185	90*	18	11	235	230	190
DN80	260	80	255	160	200	45*	18	14	320	280	190
DN100	300	100	310	180	220	45*	18	24.5	390	330	235
DN125	350	125	330	210	250	90*	19	33	-	-	-
DN150	400	150	425	240	285	45*	22	45	-	-	-
DN200	500	200	540	295	340	45*	22	90	-	-	-
DN250	600	250	630	350	395	30*	22	163	-	-	-
DN300	700	300	680	400	445	30*	22	230	-	-	-
DN350	800	350	830	460	505	22.5*	23	290	-	-	-

Dimensions in mm The indication PN refers to the flange and not to the maximum operating pressure.

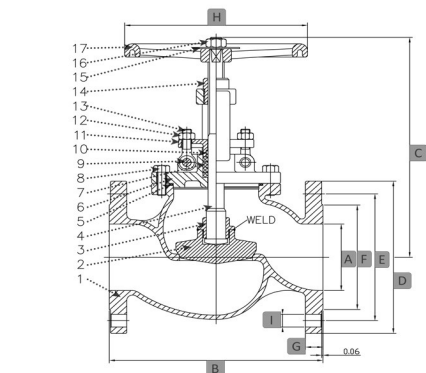


## Globe valve

### Features

- Outside screw and yoke
- Bolted bonnet
- Stem / Wedge Connection meets API 600 Pull Test
- Welded Seat
- Yoke Integrated with Bonnet
- Loose Disc
- Renewable Seat Rings
- Rising stem and non-rising hand-wheel
- Flanged ends
- Butt-weld ends
- Applicable Standards:
  - Steel valves ANSI B16.34
  - Face to face ANSI B16.10
  - End flanges ANSI B16.5
  - Butt-weld ends ANSI B16.25
  - Inspection and test API 598

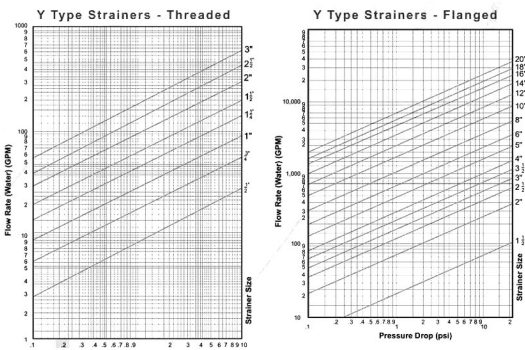
#### 1/2" - 12" Dimensions, Parts & Materials



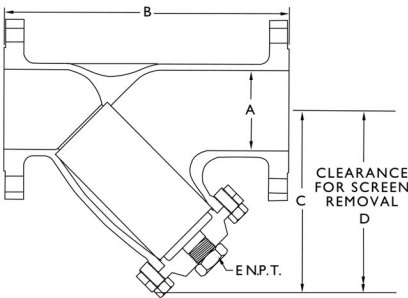
Dimensions (Inches)											Part Name		Qty	Material
Size	A	B	C	D	E	F	G	H	I	Num of Bolt Holes	No.	Part Name	Qty	Material
1/2"	0.59	4.25	7.32	3.50	2.38	1.38	0.43	5.51	0.625	4	1	Body	1	316 Stainless Steel ASTM A351 CF8M
3/4"	0.79	4.61	7.32	3.88	2.75	1.69	0.43	5.51	0.625	4	2	Flange	1	316 Stainless Steel ASTM A351 CF8M
1"	0.98	5.00	8.35	4.25	3.12	2.00	0.43	5.51	0.625	4	3	Seat Ring	1	316 Stainless Steel
1 1/2"	1.57	6.50	9.69	5.00	3.88	2.88	0.56	6.27	0.625	4	4	Bonnet Bolt	1	304 Stainless Steel
2"	1.97	7.89	11.92	6.00	4.75	3.62	0.62	7.87	0.75	4	5	Gasket	1	150# or PTFE
3"	2.56	8.50	12.20	7.00	5.50	4.12	0.69	7.87	0.75	4	6	Bonnet	1	316 Stainless Steel
4"	3.15	9.49	12.87	7.50	6.00	5.00	0.75	9.84	0.75	4	7	Disc Packing	1	PTFE
6"	3.94	12.87	17.50	9.00	7.50	6.19	0.94	9.84	0.75	4	8	Disc	1	304 Stainless Steel
8"	4.94	15.50	15.12	9.00	7.50	6.19	0.94	9.84	0.75	8	9	Eye Bolt	1	304 Stainless Steel
10"	5.91	15.98	17.50	11.00	9.50	8.50	1.00	13.81	0.875	8	10	Disc	1	316 Stainless Steel
12"	7.87	18.49	18.54	13.50	11.75	10.62	1.12	13.81	0.875	8	11	Nut	1	304 Stainless Steel
14"	9.84	24.49	22.44	16.00	14.25	12.75	1.19	19.69	1.00	12	12	Yoke Shim	1	Disc
16"	12.00	27.50	31.30	19.00	17.00	15.00	1.25	18.11	1.00	12	13	Handwheel	1	Discless Item
18"	12.00	27.50	31.30	19.00	17.00	15.00	1.25	18.11	1.00	12	14	Washer	1	304 Stainless Steel
20"	12.00	27.50	31.30	19.00	17.00	15.00	1.25	18.11	1.00	12	15	Nut	1	304 Stainless Steel



### Flow rate (water) for thread and flange



## HEBEI TONGLI SELF-CONTROL VALVE CO., LTD. FLANGED SERIES Y-STRAINERS



Parts List and Standard Materials	
Body	A126-B
Cover	A126-B
Screen <sup>1</sup>	304 SS
Plug <sup>2</sup>	A126-B
Gasket <sup>1</sup>	Graphite
Bolt/Stud <sup>2</sup>	A307-B
Nut <sup>2</sup>	A563

#### Notes:

1. Recommended Spares.
2. Materials of equivalent strength may be substituted at manufacturer's option.

### IRON PIPE FLANGED Y-STRAINERS

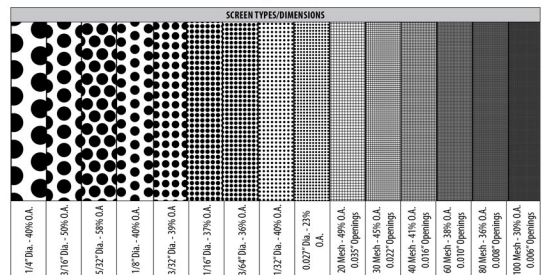
#### FEATURES

- Iron strainers are complete with Flat Face flanges in accordance with ASME B16.1.
- Strainer body meets applicable ASME Standard.
- One piece cast body.
- Strainers equipped with bolted cover flange that utilize a flat gasket seal.
- Low pressure drop.
- Upper and lower machined seats.
- 304 SS perforated screens are standard.
- Drain/Blow-off connection furnished with plug as standard.
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings.
- Compact end to end dimension.

– Upper Pressure Limits (Non-Shock)			
Size	Body Material	M.A.W.P. PSIG (Bars)	Ends
up to 12" size	A126-B - Cast iron	200 (13.79)	FF
14" and up	A126-B - Cast iron	150 (10.34)	FF
Body Material		Lower Limit °F (°C)	
A126-B, A395		-20 (-28.9)	

– Dimensional Data – Iron Class 125						
Size	A	B	C	D	E	Weight
2"	2.00	8.88	6.00	8.50	1/2	22
50	51	226	152	216	15	10
2-1/2"	2.50	10.75	8.00	11.25	1	35
65	64	273	203	286	25	16
3"	3.00	11.50	8.75	12.25	1	43
80	76	292	222	311	25	20
4"	4.00	13.88	9.50	13.38	11/4	75
100	102	353	241	340	32	34
7"	5.00	16.38	11.50	16.13	1 1/4	111
125	127	416	292	410	32	52
6"	6.00	18.50	12.63	17.69	11/2	154
150	152	470	321	449	40	70
8"	8.00	21.38	16.38	23.00	11/2	243
200	203	543	416	584	40	110
10"	10.00	26.00	19.00	26.70	2	390
250	254	660	483	678	50	177
12"	12.00	30.00	22.00	31.00	2	650
300	305	762	559	787	50	295
14"	14.00	37.38	29.00	41.00	2	815
350	356	949	737	1041	50	370
16"	16.00	42.50	33.00	46.00	2	1224
400	406	1080	838	1168	50	555

#### ENGINEERING DATA Screen Openings for Y-Strainers



#### PURPOSE

If the basket strainer is being used for protection rather than direct filtration, the strainer will suffice in most applications.

#### SERVICE

With services that require extremely sturdy screens, such as high pressure/temperature applications or services with high viscosities, we recommend that perforated screens without mesh liners be used. If mesh is required to obtain a certain level of filtration, then we recommend a trapped perf./mesh/perf. combination.

#### FILTRATION LEVEL

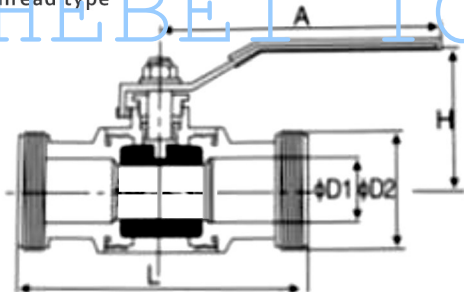
When choosing a perf. or a mesh/perf. combination attention should be given to ensure overstraining does not occur. As a general rule the specified level of filtration should be no smaller than half the size of the particle to be removed. If too fine a filtration is specified the pressure drop through the strainer will increase very rapidly, possibly causing damage to the basket.

**SANITARY VALVE**

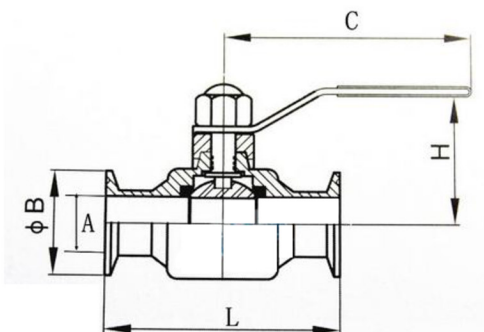
**Grooved type**

END	Welding,thread,flange
Drive	Manual,pneumatic,electric
Material	ss304. ss316L
struggle	Floating ball
Seal	PTFE
Working pressure	PN16
Working temperature	-10°C ~ +135°C

specification	Size of the pipe	A	B	C	L	KG
Φ12.7	1/2	10	25.4	100	80	0.3
Φ19	3/4	16	50.5	120	100	0.6
Φ25	1	22	50.5	130	105	0.7
Φ32	1 1/4	29	50.5	140	120	0.9
Φ38	1 1/2	35	50.5	160	136	1.2
Φ45	1 3/4	42	64	170	145	1.6
Φ51	2	47	64	175	160	1.8
Φ57	2 1/4	52	77	195	162	2.4
Φ63.5	2 1/2	58	77	200	170	2.7
Φ76	3	71	91	250	195	4
Φ89	3 1/2	83	106	260	235	6.2
Φ102	4	97	119	290	270	8.7
Φ133	5	125	145	350	290	14

**Thread type**

**Specification for technology**

	A	H	D1	D2	L	KG
Φ19	130	58	15	36	102	0.55
Φ25	130	65	22	39.5	105	0.7
Φ32	140	70	29	45.5	120	0.83
Φ38	158	73	35	55	140	1.32
Φ51	167	85	48	65	165	2

**Grooved type**




## Pneumatic butterfly valve



### Pneumatic Shut-off Butterfly Valve JKTL or DAP

#### Application

Tight-closing butterfly valve for process engineering and industrial applications

**Nominal size** DN 50 to 400 · NPS 2 to 16

**Nominal pressure** PN 10 and 16

**Max. operating pressure** 10 or 16 bar

**Temperatures** -10 to +150 °C · 14 to 302 °F

# HEBEI TONGLI VALVE

JKTL Shut-off Butterfly Valve with

- JKTL Butterfly Valve and single-acting Pneumatic Rotary Actuator

Valve body made of

- Cast iron
- Spheroidal graphite iron

Seat ring made of

- EPDM
- PTFE

Butterfly disk made of

- Spheroidal graphite iron
- Cast stainless steel
- PTFE-coated

Attachment of control valve accessories, such as pneumatic or electropneumatic positioners, electrical or pneumatic limit switches or solenoid valves according to VDI/VDE 3845.

#### Throttling service

The butterfly valve can also be used for throttling service in the rotation range from 25° to 60°.

#### Versions

Standard version · Nominal size DN 50 to 300

- JKTL (Fig. 1) · JKTL with single-acting JKTL Pneumatic Rotary Actuator

#### Further versions

- Double-acting Type DAP Rotary Actuator
- Larger valve sizes on request
- Emergency manual override for Pfeiffer JKTL and JKTL Rotary Actuators
- Single-acting JKTL Pneumatic Rotary Actuator
- Special materials

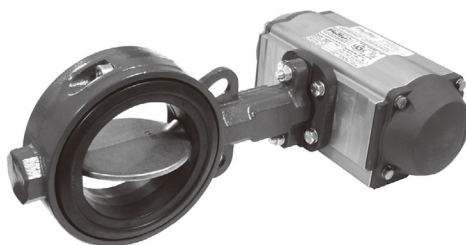


Fig. 1: JKTL Pneumatic Butterfly Valve

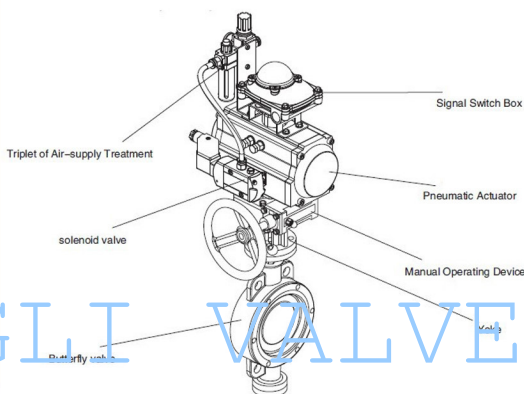


Fig. 2: JKTL Pneumatic Butterfly Valve

#### Principle of operation

The medium flows through the butterfly valve. The flow coefficient depends on the opening angle of the butterfly disk (4) and, as a result, the cross-sectional area between the disk and the body. The disk is connected to the actuator by the shaft and coupling elements.

The disk and the seat ring (3) come into contact with the process medium. The seat ring also functions as a flange seal.

#### Fail-safe position

Depending on the version of the rotary actuator, the butterfly valve has two different fail-safe positions which become effective when the pressure is reduced or when supply air fails:

#### Fail-close

The butterfly valve is closed when the supply air fails.

#### Fail-open

The butterfly valve opens when the supply air fails.

#### Legend

- 1 Bearing bushing with O ring
- 3 Seat ring
- 4 Butterfly disk with shaft
- 5 Retainer
- 6 Disk spring
- 8 Elastomer
- 10 Mounting plate



JINKETONGLI

HEBEI TONGLI VALVE

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